

# Current Water Conditions in Massachusetts

## November 13, 2014



- October precipitation was above normal
- October streamflows were normal
- October groundwater levels were normal
- October reservoir levels were generally normal

### Precipitation Conditions

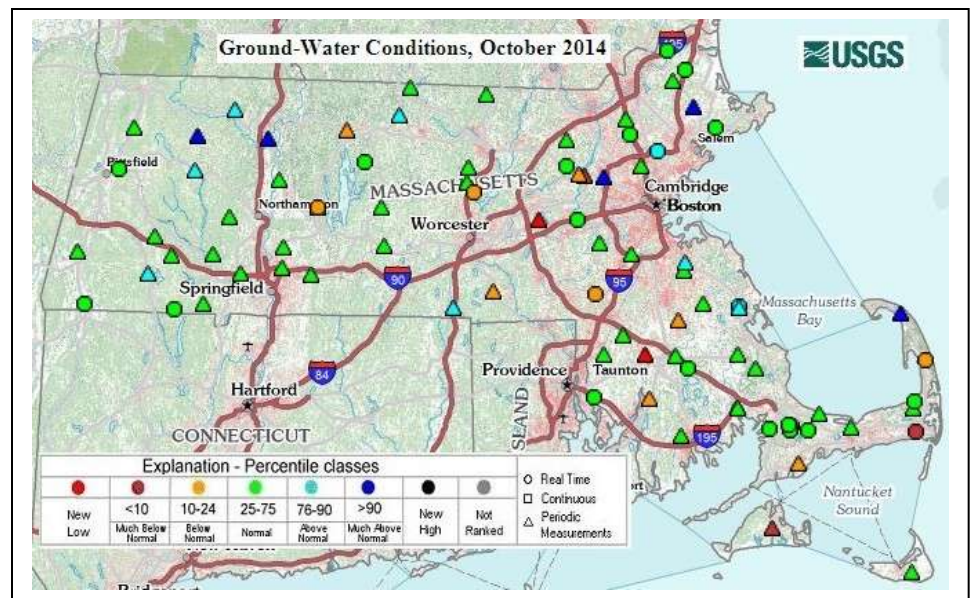
Estimated October state-wide average precipitation is 6.01 inches, which is 158 percent of the long-term average for the month. Rainfall in the regions of Massachusetts ranged from 121 percent (Cape Cod and islands) to 189 percent (Southeast) of the long term average. A table of October 2014 estimated precipitation statistics, based on preliminary precipitation data from the Department of Conservation and Recreation and National Weather Service precipitation monitoring networks, is attached. A map at the back of this report shows the distribution of October rainfall

Crop Moisture Index for Massachusetts at the beginning of November is reported to be abnormally moist (above normal range). With scattered rain events, below normal temperatures, and low evapotranspiration the forest fire season is over.

### Ground-Water Levels

Based on preliminary data, ground-water levels reported by the U.S. Geological Survey at the end of October or beginning of November were generally normal state-wide. A few below and above normal levels were measured state wide. An assessment of ground-water conditions in the Massachusetts drought regions is shown in a table at the end of this report. All regions are assessed as having normal groundwater levels. The USGS Groundwater Conditions for the end of October 2014 can be viewed at the web site:

<http://groundwaterwatch.usgs.gov/State/MapsNet.asp?ncd=crn&sc=25>

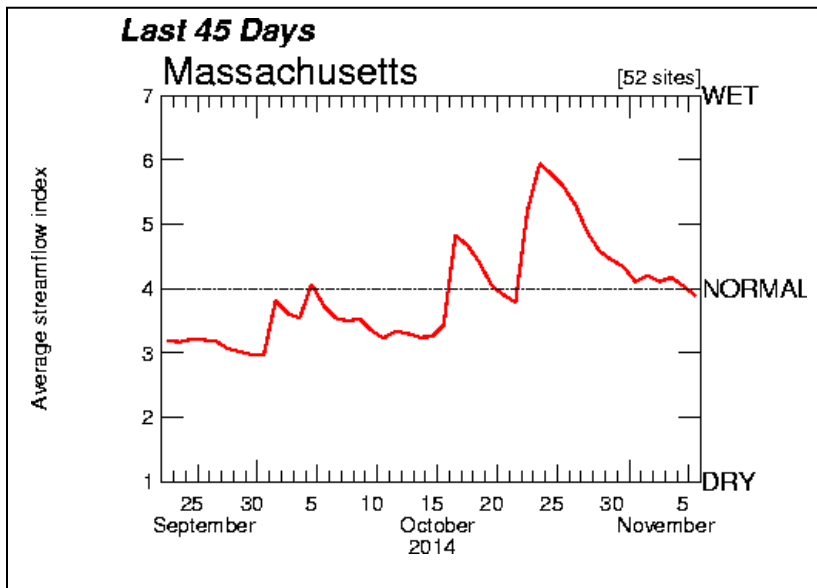
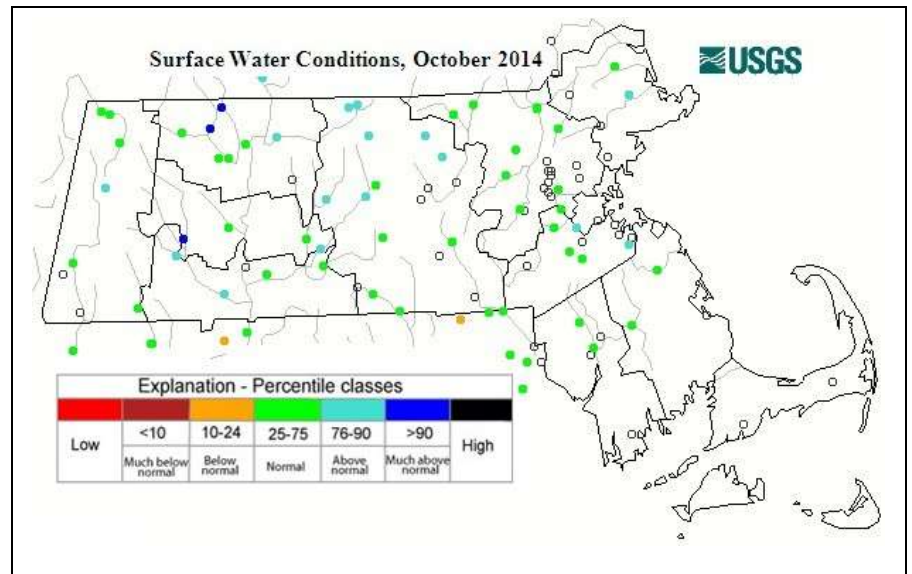


## Streamflow

Average October 2014 streamflows that are monitored by the Commonwealth of Massachusetts and United States Geological Survey (USGS) cooperative stream gaging program were generally in the normal or above normal range state-wide.

The graph below depicts a composite daily streamflow relative to normal streamflow for Massachusetts for the period of September 23, to November 6, 2014. Stream flows in the low normal range during the first part of October rose into the high normal range during the second half of the month as a result of precipitation events distributed across the period. During early November flows have been near normal. The graph is a composite of 52 real-time gages across the state with a long period of record. This streamflow plot can be found at:

[http://waterwatch.usgs.gov/index.php?map\\_type1=pa07d&map\\_type2=&map\\_type3=&map\\_type4=&web\\_type=pa07d%2Cplot&state=ma&huc=us&xinfo=&map\\_type=real&group\\_idx=1&region\\_cd=ma&group\\_idx\\_changed=1&sel\\_m=map\\_type1&sel\\_va=real](http://waterwatch.usgs.gov/index.php?map_type1=pa07d&map_type2=&map_type3=&map_type4=&web_type=pa07d%2Cplot&state=ma&huc=us&xinfo=&map_type=real&group_idx=1&region_cd=ma&group_idx_changed=1&sel_m=map_type1&sel_va=real)



### KEY:

- 1 = New record low for day
- 2 = < 10<sup>th</sup> percentile
- 3 = 10<sup>th</sup> – 24<sup>th</sup> percentile
- 4 = 25<sup>th</sup> – 74<sup>th</sup> percentile
- 5 = 75<sup>th</sup> – 89<sup>th</sup> percentile
- 6 = ≥ 90<sup>th</sup> percentile
- 7 = New record high for day

## Water Supply Reservoir Levels

Selected surface water reservoir percent-full values for water supply sources provided by water suppliers are listed below. These levels are generally normal to a little below normal for this time of year. The reservoir percent-full values listed are for the end of October or the beginning of November 2014. The Cohasset system which was only 43.5 percent full last 6 month (lowest level since January 2007) has recovered to 67.9 percent full (1 percent below normal) at the end of October.

*October /November 2014 Massachusetts Reservoir Status*

Reservoir/City or Town	Percent Full	Reservoir/City or Town	Percent Full
Quabbin	91.2	Beverly/Salem	80.0
Worcester	74.5	Lynn	59.9
Cobble Mt./ Springfield	90.8	Taunton/New Bedford/Assawompsett	84.7

Note: NA Indicates data not available for this report

## Drought Indices/Forecasts

### US Drought Monitor

The National Drought Mitigation Center's (NDMC's) November 11, 2014 Drought Monitor Map shown at right indicates abnormally dry conditions in part of the south central, southeast, and Boston metropolitan area of the state.

### Standardized Precipitation Index (SPI)

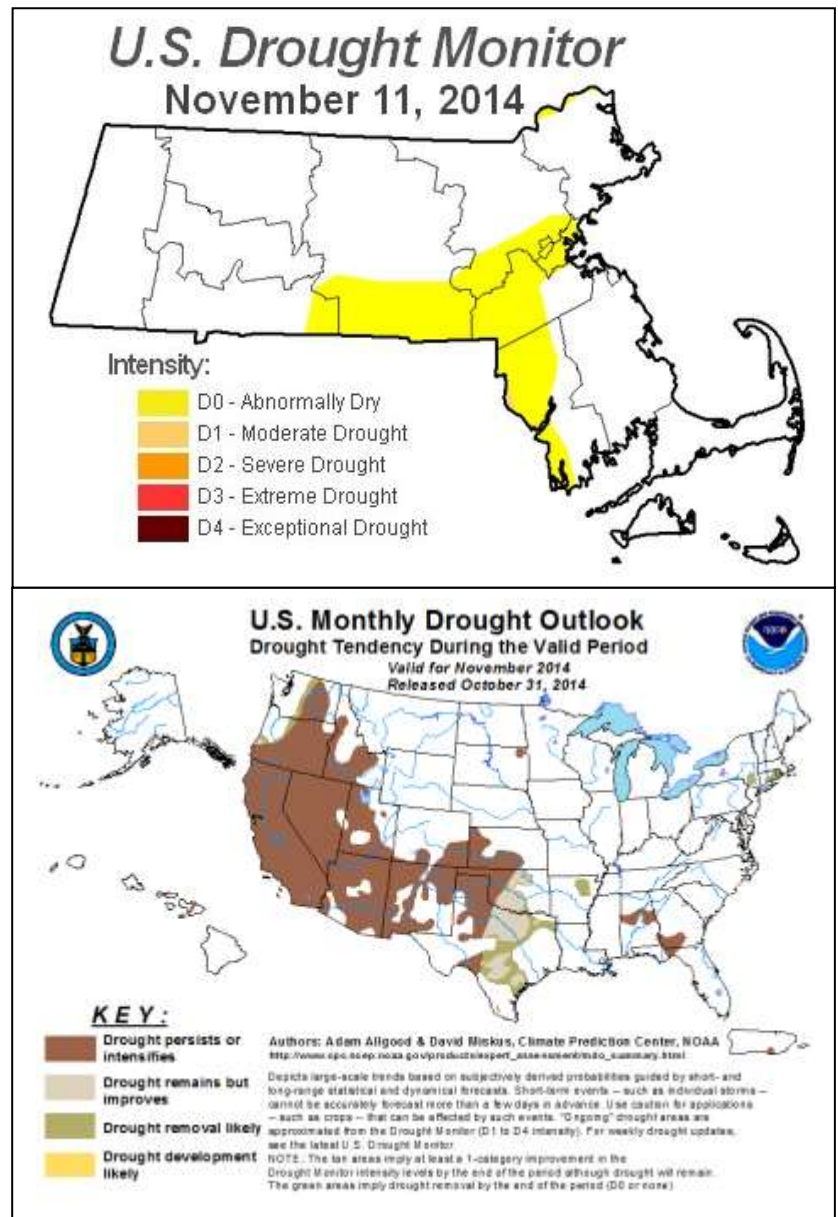
All the Standardized Precipitation Index values for the regions used for the Massachusetts Drought Management Plan are in the normal range.

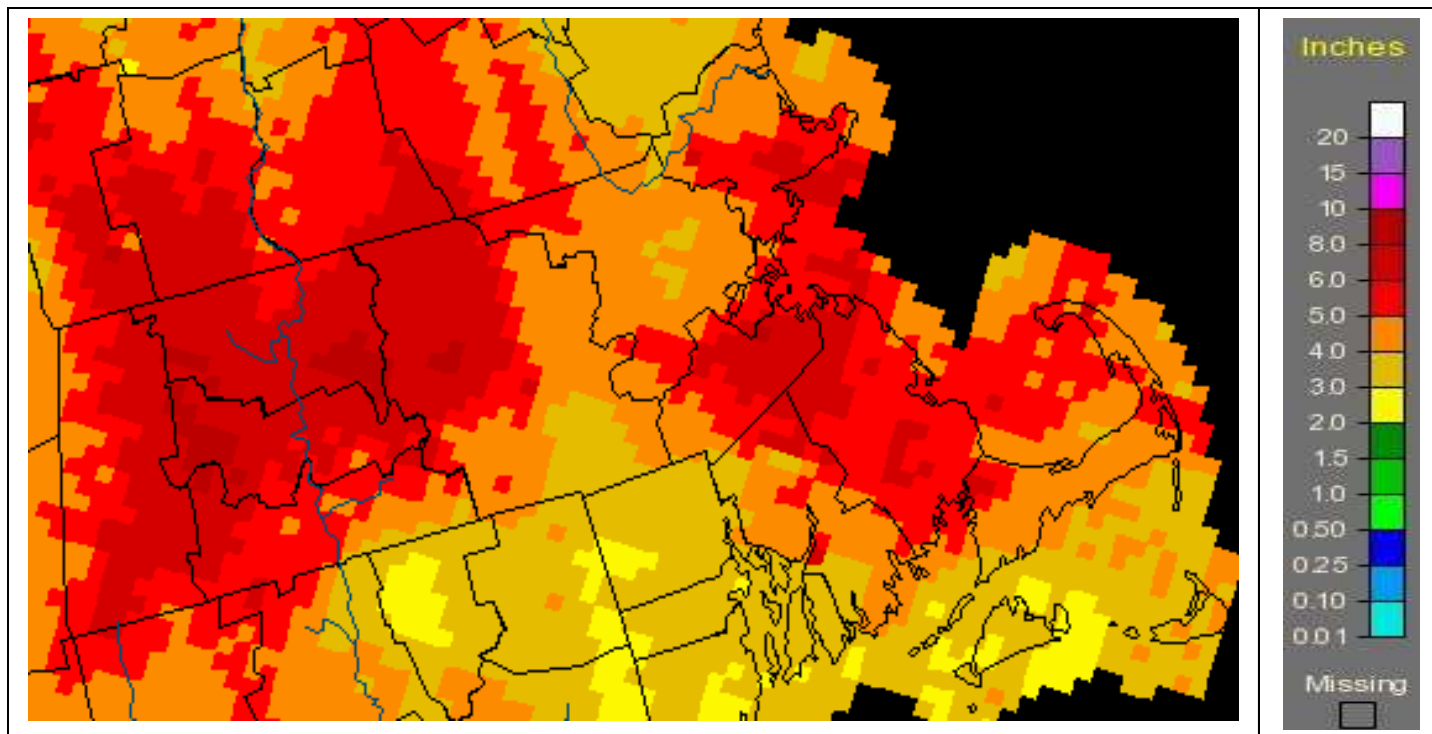
### NWS/NOAA's Climate Prediction Center

The U.S. Monthly Drought Outlook for November (shown at the right) forecasts that drought conditions will likely be removed by the end of the month. The seasonal drought outlook (not shown) predicts that there will be no drought condition by the end of January in Massachusetts.

### Extended Forecasts

Tonight a fast moving low will bring rain (Cape Cod) and snow to the region with possibility of several inches of snow in eastern areas. Friday and Saturday will have cold and breezy conditions. On Sunday and Monday a low pressure system will bring rain to coastal areas and possibly a winter mix to interior areas. The coldest weather of the season is forecast for next Tuesday and Wednesday. The National Weather Service Climate Prediction Center's extended 6 to 10- day forecast is for below normal precipitation and temperatures. The 8 to 14-day forecast is for normal precipitation and below normal temperatures. The 1-month forecast is for normal precipitation and above normal temperatures. The 3-month forecast is for above normal precipitation and temperatures. The NWS Climate Prediction Center Information can be found at: <http://www.cpc.noaa.gov/index.php>





<http://water.weather.gov/precip/>

### TOTAL RAINFALL OCTOBER 2014



### GENERAL WATER CONDITIONS IN MASSACHUSETTS - OCTOBER 2014 EOEEA and MEMA DROUGHT MANAGEMENT PLAN REGIONS

Massachusetts Regions	Surface-Water Conditions	Ground-Water Conditions
Cape and Islands	ND	Normal
Southeast	Normal	Normal
Northeast	Normal	Normal
Central	Normal	Normal
Connecticut River	Normal	Normal
Western	Normal	Normal

**Note:** Surface- and ground-water conditions for individual streamflow-gaging stations and wells may differ from general conditions. ND, no data

This report was prepared by the Massachusetts Department of Conservation and Recreation. Data were obtained from the sources described in the report and may be preliminary in nature. Additional information, previous and future water conditions reports can be found on our web site:

<http://www.mass.gov/eea/agencies/dcr/water-res-protection/water-data-tracking/precipitation-composite-current-conditions.html>